

WHAT IS CLAIMED IS:

1. An objective lens for focusing a light beam emitted from a light source on an information recording surface of an optical information recording medium,
5 wherein the objective lens has a substantially truncated-cone-shaped portion on its surface on a side of the optical information recording medium.
- 10 2. The objective lens according to claim 1, wherein the light beam passes through the substantially truncated-cone-shaped portion, and an upper surface of the substantially truncated-cone-shaped portion has a diameter larger than an effective diameter of the light beam passing through the upper surface.
- 15 3. The objective lens according to claim 1, wherein a base of the substantially truncated-cone-shaped portion of the objective lens has a radius RL_2 smaller than 1.8 mm, and a height H of the substantially truncated-cone-shaped portion satisfies
20 $\text{height } H > 0.75 \text{ mm} + \text{necessary movement amount } FD \text{ of lens} - \text{working distance } WD.$
4. An optical head comprising:
a light source;
25 an objective lens for focusing a light beam emitted from the light source on an information recording surface of an optical information recording medium;
a plurality of optical elements; and
an optical-electric conversion system;
30 wherein the objective lens is the objective lens according to claim 1.
5. An optical information recording/ reproducing apparatus, which comprises an optical head for recording or reproducing information optically with respect to an optical information recording medium and records or
35 reproduces desired information with respect to the optical information recording medium,
wherein the optical head is the optical head according to claim 4.